

1/30/04

Listing of Claims:

15. (Previously Presented) A method of screening candidate molecules for the ability to disrupt viral looping/linking factors comprising:

- (a) adding a candidate molecule to a mammalian cell culture;
- (b) providing a control mammalian cell culture without the candidate molecule, wherein the cell cultures of both (a) and (b) comprise viral looping/linking factors, wherein the factors comprise DNA-binding proteins that can self-associate, and nucleic acid molecules comprising at least two binding sites for the factors, wherein the sites are linked by a looping/linking factor;
- (c) allowing said candidate molecule to interact with the viral looping/linking factor present in the mammalian cell culture of step (a); and
- (d) ^{directly} analyzing the factor for inhibition by the candidate molecule and comparing the result to the results using the control culture, wherein the candidate molecule inhibits protein:protein self-associate between factors as demonstrated by the factor being unable to mediate linking in the presence of the candidate molecule.

17. (Currently Amended) ~~The method of claim 15~~ A method of screening candidate molecules for the ability to disrupt viral looping/linking factors comprising:

- (a) adding a candidate molecule to a mammalian cell culture;
- (b) providing a control mammalian cell culture without the candidate molecule, wherein the cell cultures of both (a) and (b) comprise viral looping/linking factors, wherein the factors comprise DNA-binding proteins that can self-associate, and nucleic acid

molecules comprising at least two binding sites for the factors, wherein the sites are linked by a looping/linking factor;

(c) allowing said candidate molecule to interact with the viral looping/linking factor present in the mammalian cell culture of step (a); and

(d) analyzing the factor for inhibition by the candidate molecule and comparing the result to the results using the control culture, wherein the candidate molecule inhibits protein:protein self-associate between factors as demonstrated by the factor being unable to mediate linking in the presence of the candidate molecule, wherein the analysis of step (d) is a gel shift assay.

§ 18. (Currently Amended) The method of claim 15 A method of screening candidate molecules for the ability to disrupt viral looping/linking factors comprising:

(a) adding a candidate molecule to a mammalian cell culture;

(b) providing a control mammalian cell culture without the candidate molecule, wherein the cell cultures of both (a) and (b) comprise viral looping/linking factors, wherein the factors comprise DNA-binding proteins that can self-associate, and nucleic acid molecules comprising at least two binding sites for the factors, wherein the sites are linked by a looping/linking factor;

(c) allowing said candidate molecule to interact with the viral looping/linking factor present in the mammalian cell culture of step (a); and

(d) analyzing the factor for inhibition by the candidate molecule and comparing the result to the results using the control culture, wherein the candidate molecule inhibits protein:protein self-associate between factors as demonstrated by the factor being

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unable to mediate linking in the presence of the candidate molecule, wherein the analysis of
step (d) is a promoter activation assay.